REMARKS

INTRODUCTION

In view of the foregoing, claim 40 has been amended, and claims 52 and 53 have been added. No new matter is presented.

Reconsideration of the allowability of all pending clams is respectfully requested. Claim 51 only sets forth the previously examined claim 51 in independent form.

REJECTIONS UNDER 35 USC 102 AND 103

Claims 40, 46-47 and 49 stand rejected under 35 U.S.C. 102(e) as being anticipated by Ozkan et al., US Patent No. 6,111,611; and claims 42, 48, and 50-51 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ozkan et al. in view of Kondo et al., US Patent No. 6,763,522. These rejections are respectfully traversed.

By way of review, and only as a example, independent claims 51 and 40 respectively set forth:

> 51. A method of channel searching for a digital television receiver, comprising:
>
> converting a received radio frequency (RF) digital broadcast signal into a baseband signal and decoding the converted baseband signal to reconstruct a digital broadcast transport stream which includes audio data, video data, and program information;
>
> extracting the audio data, the video data, and the program information from the reconstructed digital broadcast transport stream and storing the extracted program information in a storage;
>
> processing the extracted audio data to be output as sound;
>
> processing the extracted video data to be output on a screen;
>
> accessing the storage to generate a channel list based on the stored program information,
>
> wherein the channel list is made up of one or more separately identifiable channel groupings, each having one or more two-part channel numbers, where each of the one or more two-part channel numbers includes a main channel number as a first part and a sub-channel number as a second part, and where each two-part channel number of a respectively identified channel grouping has a same main channel number and different sub-channel numbers; and
>
> enabling a user to navigate the channel list to search a two part channel number,
>
> wherein information included in the channel list is derived from program associated information from a Program Specific Information (PSI) table, for plural programs included in the transport stream conforming with an MPEG standard, wherein an identifiable program according to the MPEG standard is distinguished from a predetermined corresponding two-part channel number,
>
> *wherein the channel list is configured to be navigable between two-part channel numbers, of one or more two-part channel numbers of a first channel grouping, and between the first channel grouping and a two-part channel number of a second channel grouping.*

wherein the channel list is navigated in a first direction between the one or more two-part channel numbers of the first channel grouping, and navigated in a second direction between the first channel grouping and the second channel grouping, and

wherein the first direction is different from the second direction.

40. A method of channel searching for a digital television receiver, comprising:

receiving a digital broadcast signal that includes audio data, video data, and additional information;

extracting the additional information from the digital broadcast transport stream and storing the extracted additional information;

generating a channel list that is designed to be shown in a single display window, based on the stored additional information so as to enable a user to navigate the channel list to search a two-part channel number,

wherein the channel list is made up of one or more separately identifiable channel groupings, each having one or more two-part channel numbers, where each of the one or more two-part channel numbers includes a main channel number as a first part and a sub-channel number as a second part, and where each two-part channel number of a respectively identifiable channel grouping has a same main channel number and different sub-channel numbers,

wherein the navigation of the channel list is enabled to be performed in a two-dimensional number-based order on the single display window, between two-part channel numbers of a channel grouping or between channel groupings, *where the window is vertically and horizontally embedded with two-part channel numbers*, and

wherein *information included in the channel list is derived from program associated information in received Program Specific Information (PSI) table data conforming with an MPEG standard*, for plural programs included in a transport stream conforming with the MPEG standard, where an identifiable program according to the MPEG standard is distinguished from a predetermined corresponding two-part channel number.

"Channel *map*" of Ozkan et al.

As noted in the January 11, 2013 Amendment, Ozkan et al. fails to disclose the claimed *generated channel list* that is enabled to be navigated by a user.

Ozkan et al. only sets forth a portion of one sentence that states that the available channels may be provided to the user in some hierarchical menu, but fails to provide any further suggestion or disclosure of what this hierarchical menu would look like.

Ozkan et al. does not disclose or suggest that the hierarchical menu would display a channel list that is "made up of one or more separately identifiable channel groupings, each having one or more two-part channel numbers, where each of the one or more two-part channel numbers includes a main channel number as a first part and a sub-channel number as a second part, and where each two-part channel number of a respectively identifiable channel grouping has a same main channel number and different sub-channel numbers."

Ozkan et al. does not disclose or suggest that the hierarchical menu would be *designed to be shown in a single display window, or that the hierarchical menu would be based on extracted additional information.*

Further, Ozkan et al. fails to disclose or suggest that "*the navigation of the channel list is enabled to be performed in a two-dimensional number-based order on the single display window, between two-part channel numbers of a channel grouping or between channel groupings, where the window is vertically and horizontally embedded with two-part channel numbers.*"

As noted previously, Ozkan et al. does not provide **any** particular guidance as to what the navigable channel list would look like or how a user would navigate the channel list.

Ozkan et al. only generally describes that a user may be provided with some menu or some screen guide, without any further guidance as to what that menu or screen guide would look like or how a user would navigate through the guide.

For example, in col. 6, lines 43-49, Ozkan et al. sets forth:

> The dual program channel identification numbers used to select sub-channel SC may be entered by the user in a variety of ways. *These may include using remote unit 70 to select sub-channel SC from within a hierarchical menu system displaying program channel selections in a program guide* or by simple sequential number entry via the unit 70 keypad, for example.

Here, Ozkan et al. is only vaguely describing that some type of menu or program guide will be displayed to the user.

During the Interview with the Examiner conducted on January 23, 2013, the Examiner indicated that the ***channel map*** of Ozkan et al. suggests what the hierarchical menu would look like.

However, as noted, the channel map of Ozkan et al. has **no relationship** to the user interface provided to the user.

The channel map of Ozkan et al. is an ***internal table/mapping*** that is used by a decoder.

The internal table/mapping of the channel map only identifies what physical channel the decoder should tune to for a particular virtual channel, and/or only identifies what "MPEG program number" should be accessed in a received transport stream, e.g., the transport stream obtained by the decoder tuning to the underlying physical channel.

The MPEG program number is an **internal** number based on the MPEG standard that the user will **never** to know, need to see, or ever select for viewing.

Equally, the user does not need to know, see, or select the physical channel number

Again, the channel map of Ozkan et al. is only an internal table/mapping that identifies to the decoder what physical channel to tune to or what MPEG program number to extract from the corresponding received transport stream.

Ozkan et al. merely states that there is some type of user interface that permits the user to select virtual channels. The decoder would receive that virtual channel selection and then look up that selection in the internal channel map to determine what physical channel to tune to and/or what MPEG program number to extract from a received transport stream.

Accordingly, regardless of the discussions of the internal "channel map" in Ozkan et al., the make up of this channel map in Ozkan et al. does not define what virtual channels would ultimately be displayed or selectable by a user in some type of hierarchical menu.

In addition, as noted above, the internal "channel map" of Ozkan et al. is never displayed to the user, so the internal "channel map" of Ozkan et al. cannot be interpreted as the claimed "channel list" that is designed *to be shown in a single display window, based on the stored additional information.*

Further, though the "channel map" of Ozkan et al. may discuss two-part channel numbers, Ozkan et al. does not disclose or suggest the claimed designed to be displayed "channel list" that is made up of " *one or more separately identifiable channel groupings, each having one or more two-part channel numbers, where each of the one or more two-part channel numbers includes a main channel number as a first part and a sub-channel number as a second part, and where each two-part channel number of a respectively identifiable channel grouping has a same main channel number and different sub-channel numbers."*

PSI of Ozkan et al.

In addition, during the Interview with the Examiner, it was explained that the "program specific information" of Ozkan et al. cannot be interpreted as being the well known PSI of an MPEG standard.

As explained in the Interview, "program specific information (PSI)" and PSI according to the MPEG standard are a well known and understood terms that have the same meaning.

For example, section C.1 of Annex C of ISO/IEC 13818-1 : 2000(E) sets forth:

> This Recommendation | International Standard provides a method for describing the contents of Transport Stream packets for the purpose of the demultiplexing and presentation of programs. The coding specification accommodates this function through the Program Specific Information (PSI). This annex discusses the use of PSI.
>
> *The PSI may be thought of as belonging to four tables:*

1) Program Association Table (PAT);
2) TS Program Map Table (PMT);
3) Network Information Table (NIT);
4) Conditional Access Table (CAT).

The contents of the PAT, PMT and CAT are specified in this Recommendation | International Standard. The NIT is a private table, but the PID value of the Transport Stream packets which carry it is specified in the PAT. It must however, follow the section structure defined in this Recommendation | International Standard.

On page 4, lines 2-3, the present application at least sets forth: "Here, the additional data includes program specific information (PSI) organized as a table with respect to program associated information prescribed in MPEG-2, and the aforementioned EPG information."

MPEG-2 Systems is formally known as ISO/IEC 13818-1.

Differently, ***regarding FIG. 1*** and beginning in col. 4, line 54, Ozkan et al. sets forth:

The transport stream provided to decoder 100 comprises data packets containing program channel data and program specific information. Unit 22 directs the program specific information packets to processor 60 which parses, collates and assembles this information into hierarchically arranged tables. Individual data packets comprising the User selected program channel are identified and assembled using the assembled program specific information. The program specific information contains conditional access, network information and identification and linking data enabling the system of FIG. 1 to tune to a desired channel and assemble data packets to form complete programs. The program specific information also contains ancillary program guide information (e.g. an Electronic Program Guide--EPG) and descriptive text related to the broadcast programs as well as data supporting the identification and assembly of this ancillary information.

The program specific information is assembled by processor 60 into multiple hierarchically arranged and interlinked tables. An exemplary hierarchical table arrangement includes a Master Guide Table (MGT), a Channel Information Table (CIT), Event Information Tables (EITs) and optional tables such as Extended Text Tables (ETTs). The MGT contains information for acquiring program specific information conveyed in other tables such as identifiers for identifying data packets associated with the other tables. The CIT contains information for tuning and navigation to receive a User selected program channel. The EIT contains descriptive lists of programs (events) receivable on the channels listed in the CIT. The ETT contains text messages describing programs and program channels. Additional program specific information describing and supplementing items within the hierarchical tables is conveyed within descriptor information elements. The program specific information acquired by processor 60 via unit 22 is stored within internal memory of unit 60.

Similarly, ***regarding FIGS. 1-9*** and beginning at col. 5, line 63, Ozkan et al. sets forth:

The program specific information is in the form of hierarchically arranged tables including an MGT, CIT, EIT, and ETT together with supplementary descriptor information. The PID that identifies packets comprising the MGT data is

predetermined and stored within processor 60 internal memory. Further, the MGT conveys the PIDs that identify the CIT, EIT, and ETT data and conveys other information indicating the size of these tables. Processor 60 monitors the MGT for updates to identify any changes in PIDs or table sizes. Therefore, after processor 60 determines from the FEC lock indication provided by unit 17 that valid data is being provided to transport processor 22, the MGT may be acquired without additional PID information. Using Control signal C, processor 60 configures transport processor 22 to select the data packets comprising the remaining program specific information including the CIT, EIT and ETT data. Processor 22 matches the PIDs of incoming packets provided by unit 17 with PID values pre-loaded in control registers within unit 22 by processor 60. Further, processor 60 accesses, parses and assembles the program specific information packets captured by processor 22 and stores the program specific information within its internal memory. Processor 60 derives tuning parameters including PTC carrier frequency, demodulation characteristics, and sub-channel PIDs, from the acquired program specific information. Processor 60 uses this information in configuring units 13, 15, 17 and decoder 100 elements to acquire selected sub-channel (SC) program content.

The program specific information including MGT, CIT, EIT, and ETT data and associated descriptors acquired and collated by processor 60 incorporates advantageous features exemplified in the data formats presented in ***FIGS. 2-9****. These features facilitate the identification, acquisition, assembly and decoding of program channel content and associated program guide data by decoder 100 (FIG. 1).* Processor 60 forms a MGT as exemplified by the data format of FIG. 2 by accessing and assembling the program specific information packets that are stored in the unit 60 internal memory. The MGT contains data identifiers e.g. PID_ETT 205 and PID_PG 210 (FIG. 2) enabling the assembly of the CIT, EIT and ETT tables. Processor 60 uses the MGT data identifiers to access and assemble the program specific information packets to form the CIT, EIT, and ETT data and associated descriptors.

Still further, ***regarding FIG. 10*** and beginning at col. 10, line 20, Ozkan et al. sets forth:

FIG. 10 shows a method for generating program specific information including MGT, CIT, EIT and ETT data and descriptors containing the advantageous features previously described. The method may be employed at an encoder for broadcasting video data such as the data received by antenna 10 of FIG. 1 or the method may be employed within a decoder unit such as within processor 60 of FIG. 1.

Accordingly, every embodiment of Ozkan et al. relies upon these particular MGT, CIT, EIT and ETT tables described in Ozkan et al.

Thus, Ozkan et al. does not disclose the claimed PSI that conforms with an MPEG standard.

The Examiner has indicated that because the first paragraph of the Detailed Description of Ozkan et al. indicates that the PSI of the invention may be of different types, including PSI of MPEG, then this suggestion in Ozkan et al. is sufficient to meet the claimed requirement that the PSI be conforming with an MPEG standard.

The first and second paragraphs of the Detailed Description of Ozkan et al. sets forth:

> FIG. 1 is a block diagram of a digital video receiving system for demodulating and decoding broadcast signals, according to the principles of the invention. Although the disclosed system is described in the context of a system for receiving video signals incorporating program specific information including program guide data in MPEG compatible format, it is exemplary only. *The program specific information may be of a variety of types. For example, it may comply with Program Specific Information (PSI) requirements specified in section 2.4.4 of the MPEG systems standard or it may comply with the high definition television (HDTV) signal* standard Digital Television Standard for HDTV Transmission of Apr. 12, 1995, prepared by the United States Advanced Television Systems Committee (ATSC) or other ATSC standards. *Alternatively, it may be formed in accordance with proprietary or custom requirements of a particular system*.
>
> The principles of the invention may be applied to terrestrial, cable, satellite, Internet or computer network broadcast systems in which the coding type or modulation format may be varied. Such systems may include, for example, non-MPEG compatible systems, involving other types of encoded datastreams and other methods of conveying program specific information. Further, although the disclosed system is described as processing broadcast programs, this is exemplary only. *The term `program` is used to represent any form of packetized data such as audio data, telephone messages, computer programs, Internet data or other communications, for example*.

Here, these two paragraphs of Ozkan et al. are merely "boilerplate" paragraphs that provide **no** guidance or suggestion to one of ordinary skill in the art as to how to implement the invention of Ozkan et al. in any manner other than the particular described ***particular MGT, CIT, EIT and ETT tables described in Ozkan et al.***

To serve as an anticipating reference, the reference ***must enable*** that which it is asserted to anticipate. *"A claimed invention cannot be anticipated by a prior art reference if the allegedly anticipatory disclosures cited as prior art are not enabled."* Amgen, Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1354, 65 USPQ2d 1385, 1416 (Fed. Cir. 2003). See Bristol-Myers Squibb v. Ben Venue Laboratories, Inc., 246 F.3d 1368, 1374, 58 USPQ2d 1508, 1512 (Fed. Cir. 2001) ("***To anticipate the reference must also enable one of skill in the art to make and use the claimed invention.")***; PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566, 37 USPQ2d 1618, 1624 (Fed. Cir. 1996) ("***To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter.***").

As noted above, **every** embodiment of Ozkan et al. is based upon a program specific information that has ***particular MGT, CIT, EIT and ETT tables.***

The disclosure of Ozkan et al. can only be enabling for an application of the invention of Ozkan et al. that uses these ***particular MGT, CIT, EIT and ETT tables.***

The *one* sentence in the first paragraph of the Detailed Description of Ozkan et al.,

that "[t]he program specific information may be of a variety of types. For example, it may comply with Program Specific Information (PSI) requirements specified in section 2.4.4 of the MPEG systems standard," is not sufficient to enable one skilled in the art to make and use the invention of Ozkan et al. *without* these *particular MGT, CIT, EIT and ETT tables* and in accordance with a completely different program specific information (PSI) according to an MPEG standard.

As noted above, every drawing of Ozkan et al. is based upon a PSI with the ***particular MGT, CIT, EIT and ETT tables***, and the entire disclosure of Ozkan et al. is based upon a PSI with the ***particular MGT, CIT, EIT and ETT tables.***

Accordingly, **if** the PSI of Ozkan et al. were to be *changed from* using these particular ***MGT, CIT, EIT and ETT tables*** of Ozkan et al., to now using the aforementioned ***MPEG PSI tables PAT, PMT, NIT, and CAT***, the entire disclosure of the invention of Ozkan et al. would have to be dismissed.

Further, the PSI tables according to an MPEG standard does **not** include a ***channel map*** as described upon Ozkan et al.

Thus, if the PSI tables of Ozkan et al. were changed to be PSI tables according to the MPEG standard, then all claims of Ozkan et al. would not be enabled by the disclosure of Ozkan et al.

For example, independent claims 1, 5, 14, 16, 17, 24, 26, 30, and 31 of Ozkan et al. all rely upon the channel map based on the particular ***MGT and/or CIT tables*** of Ozkan et al.

However, if the PSI tables of Ozkan et al. were changed to be PSI tables according to the MPEG standard, which does not include a table that would correspond to the "channel map" of Ozkan et al., the claims of Ozkan et al. would not be enabled, and the invention of Ozkan et al. would not work.

Therefore, though the "boilerplate" in the first paragraph of Ozkan et al. states that the PSI of Ozkan et al. could be swapped with the PSI of an MPEG standard, this "boilerplate" is not sufficiently enabling to one of ordinary skill in the art to make and use the invention of Ozkan et al. with the PSI of the MPEG standard. Further, if the PSI of Ozkan et al. were changed to be the PSI of the MPEG standard, there is no explanation or suggestion in any of the embodiments of Ozkan et al. as to how such **different** tables of the MPEG standard could accomplish the goals or implement the invention of Ozkan et al. Lastly, if the PSI of Ozkan et al. were changed to be the PSI of the MPEG standard, there would be **no** table of the PSI of the MPEG standard that would correspond to the claimed channel map in all independent claims of Ozkan et al.

In summary, Ozkan et al. does not disclose, suggest, or enable using the PSI according to an MPEG standard providing ***PAT, PMT, NIT, and CAT tables*** instead of the particular ***MGT, CIT, EIT and ETT tables*** relied upon in every embodiment of Ozkan et al.

Ozkan et al. cannot be relied upon as an anticipating reference for the claimed: "*wherein information included in the channel list is derived from program associated information in received Program Specific Information (PSI) table data conforming with an MPEG standard.*"

MENU/GUIDE APPROACH OF KONDO ET AL.

It is respectfully submitted that Kondo et al. fails to disclose or suggest, either alone or in combination with Ozkan et al., the generation of *a channel list that is* ***designed to be shown in a single display window.***

In addition, it is respectfully submitted that Kondo et al. fails to disclose "*generating a channel list that is designed to be shown in a single display window*, based on the stored additional information *so as to enable a user to navigate the channel list to search a two-part channel number*", or "*wherein the navigation of the channel list is enabled to be performed in a two-dimensional number-based order on the single display window, between two-part channel numbers of a channel grouping or between channel groupings, where the window is vertically and horizontally embedded with two-part channel numbers*."

As noted previously:

> Kondo et al. suggests to generate virtual channels of only channels that are actually broadcasting through a 'virtual channel simplification' where only received minor channels are reviewed. Of the minor channels that are reviewed a 'virtual channel' is configured based upon **names** of each major channel and **names** of minor channels, so a displayed channel listing is based upon the **names** of a channel.
>
> Further, instead of providing navigation of a channel list in a two-dimensional numerical order, between two-part channel numbers of a channel grouping or between channel groupings, Kondo et al. is particularly focused on only displaying a non-numerical listing of names of available minor channels for a named single major channel, and then only information for a single minor channel of the displayed available minor channels.
>
> For example, in FIGS. 2A-2D, Kondo et al. only provides a listing of names of minor channels of a single major channel, and then only program guide information for a named single minor channel. Further, in FIGS. 2A-2D, any

navigation between names of minor channels is performed in ***a same direction*** as navigation between names of major channels.

FIG. 2A of Kondo et al. sets forth such an arrangement with a current television show or graphic of a particular underlying program within a PIP area above the corresponding *named* minor channel based program guide info. The user is permitted to select a particular named minor channel by continuing to navigate in a same direction as when the named major channel is traversed.

FIG. 2B of Kondo et al. sets forth an overlaying of the program guide information over the current television show or graphic of the particular underlying program and permits the user to select different *named* minor channels in a ***separate a drop down menu***.

FIG. 2C of Kondo et al. is similar to FIG. 2A but provides future programing time duration information for the single named minor channel. The user is permitted to select a particular named minor channel by continuing to navigate in a same direction as when the named major channel is traversed.

FIG. 2D of Kondo et al. is likewise similar to FIG. 2B also providing the programming time duration information within the overlay. FIG. 2D also permits the user to select different *named* minor channels in a ***separate a drop down menu.***

Here, Kondo et al. is directed to displaying names of channels, not based on channel numbers or two-part channel numbers, and fails to disclose or suggest that a user would ever be enabled to perform navigation of the channel list in a two-dimensional numerical order, between two-part channel numbers of a channel grouping or between channel groupings.

Accordingly, neither Ozkan et al. nor Kondo et al. disclose or suggest a channel list that is designed to be shown in a single display window. In addition, Kondo et al. merely describes a separate window or a navigable pull down or drop down menu, e.g., as interpreted as a potential second dimension by the Examiner during the January 23, 2013 Interview. That is, Kondo et al. fails to describe or suggest a channel list that is designed to be shown in a single display window vertically and horizontally embedded with two-part channel numbers.

More particularly, both Ozkan et al. and Kondo et al. are perfectly silent on the navigation in a two-dimensional number-based order on a single display window, where the window is vertically and horizontally embedded with two-part channel numbers

The independent claims have advantages of allowing the user to more easily and more quickly find respective program associated information for tuning a channel, at a glance while

navigating in a two-dimensional number-based order on the single display window.

However, in Kondo et al., for a user to find respective program associated information such as electronic program guide, it is necessary to use multiple windows or pull down menus, e.g. in a top-down manner, which results in a cumbersome process to the user.

Lastly, applicants again request the Examiner review and consider the comments provided by the previously provided Declaration by Dr. Glenn Arthur Adams Jr. discussing both Kondo et al. and Ozkan et al. that was submitted in the related co-pending application Serial No. 12/822,878.

Based at least on the above, withdrawal of these rejections is accordingly requested.

Therefore, it is respectfully submitted that independent claims 40 and 51 are patentably distinct over either Ozkan et al. individually, or a combination of Ozkan et al. and Kondo et al. respective dependent claims are equally in allowable condition based on their respective features and dependencies from allowable base claims.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,
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